

**Administrative Unit Proliferation in Parliamentary Systems:
Evidence from Turkish Elections, 1960-2018
Supplemental Material**

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Appendix A Robustness Checks

The results we present in the paper are robust to the checks in this section.

A.1 Removing Districts Split More Than Once

Because the dependent variable in our study is the splitting of districts to establish new districts, we need to take a closer look at the districts. If a district is split more than once, the reader might think that the inclusion of these districts in the analysis with districts split only once biases the results. We acknowledge this possibility, and we control for the district split lag for only the splits that occurred in the immediately preceding electoral cycle. Due to the long temporal scope of our dataset and the change in government types and accompanying electoral constraints, we do not envision the possibility that splits occurring earlier than one electoral cycle to have an effect on subsequent decisions in the district on theoretical grounds. However, we would like to address this potential concern by removing the districts split more than once -regardless of the timing of the splits- and running the models in the resulting subset of the data. If our reasoning is correct, the results should not change.

There are 57 such districts in the dataset. These are: Aksaray, Bakirkoy, Bala, Bartin, Bayburt, Buncalan, Cal, Cankaya, Carsamba, Catalca, Corlu, Cumra, Dazkiri, Dortyol, Duzce, Eyup, Fatsa, Gorele, Igdır, Karadeniz Ereğli, Gediz, Iskenderun, Iskilip, Karabuk, Karsiyaka, Kartal, Kigi, Kirikkale, Koycegiz, Kucukcekmece, Kursunlu, Sereflıkoçisar, Uskudar, Vakfıkebir, Yenimahalle and the central districts of the following provinces: Burdur, Cankiri, Denizli, Diyarbakir, Erzurum, Eskisehir, Isparta, Izmir, Kayseri, Kocaeli, Konya, Malatya, Kahramanmaraş, Nevşehir, Ordu, Rize, Sakarya, Samsun, Sanliurfa, Van, Gaziantep, and Aydin. We remove these districts from the dataset and run the models on the resulting subset.

Table 1 presents the estimation results from this check.

Table 1: Administrative Unit Proliferation in Turkey, 1960–2018

	I	II	III	IV	V
Single-party government	2.36*** (0.26)	-1.96** (0.79)	3.49*** (0.57)		
Single-party government × Lagged (t-1) electoral volatility		0.15*** (0.03)			
Incumbent vote share (district)			0.01 (0.01)		
Single-party government × Incumbent vote share (district)			-0.03** (0.01)		
Coalition size				-2.61*** (0.36)	-2.90*** (0.48)
Coalition ideological connectedness				0.20*** (0.03)	0.33*** (0.07)
Coalition size × Coalition ideological connectedness					-0.03** (0.01)
Lagged (t-1) electoral volatility	0.02*** (0.01)	-0.12*** (0.03)	0.02*** (0.01)	0.02*** (0.01)	0.02*** (0.01)
Electoral disproportionality index	0.08*** (0.01)	0.11*** (0.02)	0.09*** (0.02)	0.14*** (0.02)	0.14*** (0.02)
District margin of victory	-0.02*** (0.01)	-0.01* (0.01)	-0.01** (0.01)	-0.01 (0.01)	-0.01 (0.01)
Lagged vote share of Right parties	0.03*** (0.01)	0.02*** (0.01)	0.03*** (0.01)	0.02*** (0.01)	0.02*** (0.01)
District split lag	-0.77** (0.38)	-0.86** (0.38)	-0.80** (0.38)	-0.78** (0.38)	-0.81** (0.38)
Share of rural population (district)	0.42 (0.45)	0.41 (0.45)	0.33 (0.45)	0.40 (0.45)	0.42 (0.45)
Age of district	0.01* (0.00)	0.01* (0.00)	0.01* (0.00)	0.01* (0.00)	0.01* (0.00)
Ethnic majority district	-0.49** (0.24)	-0.52** (0.25)	-0.55** (0.25)	-0.54** (0.25)	-0.54** (0.25)
Ethnic party contesting in election	1.54*** (0.20)	1.74*** (0.22)	1.54*** (0.26)	2.00*** (0.25)	1.88*** (0.25)
ln(District population)	0.69*** (0.10)	0.69*** (0.10)	0.68*** (0.10)	0.69*** (0.10)	0.70*** (0.11)
Time trend	✓	✓	✓	✓	✓
Observations	10325	10325	10325	10314	10314
AIC	1621	1592	1619	1574	1571

Standard errors in parentheses. Random intercept logistic regression models where a dichotomous variable tracking whether a district split is the dependent variable. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

A.2 Removing New Districts That Became Mother Districts

The reader might be interested in a further characteristic related to district splits. The dynamic nature of territorial reforms means that sometimes a new district is subsequently split. The reader might have a concern that the presence of districts in the dataset that were subject to these two effects (being a splinter and a mother district) might bias the results. While the long temporal scope and the dynamics of government changes and electoral constraints mean that we do not theoretically expect any differences among these districts (new districts which were then subsequently split), we would like to address this potential concern. If our theoretical reasoning is true, the exclusion of these districts should not change our results.

There are 17 such districts in the dataset. These are: Akpınar, Arıcak, Aslanapa, Atkaracalar, Avcılar, Büyükçekmece, Cumayeri, Esenler, Guzelyurt, Haskoy, Kecioren, Kocasinan, Meram, Pendik, Umraniye, Yildirim, and Yuregir. We remove these districts from the dataset and run the models on the resulting subset.

Table 2 presents the estimations results from this check.

A.3 Removing All Districts Impacted More Than Once by Reforms

Although we address potential reader concerns about the panel in the previous two robustness checks, the reader might still be concerned that the inclusion of one group of districts in (i.e. in A.1) and excluding others (i.e. in A.2) -and vice versa- might still be having an effect on the estimates. In order to address this potential concern, we provide another check by excluding all districts mentioned in the previous two sections. These districts share one characteristic: They were all affected by unit proliferation more than once. If our reasoning is correct, removing them all should not change our results.

Table 3 presents the estimation results from this check.

Figure 1 provides the spatial distribution of all districts affected more than once by unit proliferation.

Table 2: Administrative Unit Proliferation in Turkey, 1960–2018

	I	II	III	IV	V
Single-party government	2.78*** (0.25)	-0.59 (0.75)	4.62*** (0.53)		
Single-party government × Lagged (t-1) electoral volatility		0.11*** (0.03)			
Incumbent vote share (district)			0.03*** (0.01)		
Single-party government × Incumbent vote share (district)			-0.04*** (0.01)		
Coalition size				-2.65*** (0.30)	-2.74*** (0.33)
Coalition ideological connectedness				0.20*** (0.03)	0.26*** (0.06)
Coalition size × Coalition ideological connectedness					-0.01 (0.01)
Lagged (t-1) electoral volatility	0.02*** (0.00)	-0.09*** (0.03)	0.01*** (0.01)	0.02*** (0.00)	0.02*** (0.01)
Electoral disproportionality index	0.10*** (0.01)	0.12*** (0.02)	0.13*** (0.02)	0.15*** (0.02)	0.15*** (0.02)
District margin of victory	-0.02*** (0.01)	-0.01** (0.01)	-0.01* (0.01)	-0.01 (0.01)	-0.01 (0.01)
Lagged vote share of Right parties	0.02*** (0.01)	0.02*** (0.01)	0.02*** (0.01)	0.01** (0.01)	0.01** (0.01)
District split lag	-0.06 (0.24)	-0.13 (0.24)	-0.09 (0.24)	-0.10 (0.24)	-0.11 (0.23)
Share of rural population (district)	-0.07 (0.39)	-0.06 (0.40)	-0.18 (0.40)	-0.07 (0.40)	-0.06 (0.40)
Ethnic majority district	-0.46** (0.22)	-0.49** (0.22)	-0.56** (0.22)	-0.52** (0.22)	-0.53** (0.22)
Ethnic party contesting in election	1.45*** (0.18)	1.59*** (0.19)	1.54*** (0.23)	1.85*** (0.21)	1.80*** (0.21)
ln(District population)	0.72*** (0.09)	0.73*** (0.09)	0.72*** (0.09)	0.73*** (0.09)	0.73*** (0.09)
Age of district	0.02*** (0.00)	0.02*** (0.00)	0.02*** (0.00)	0.02*** (0.00)	0.02*** (0.00)
Time trend	✓	✓	✓	✓	✓
Observations	10974	10974	10974	10963	10963
<i>AIC</i>	1970	1953	1957	1924	1925

Standard errors in parentheses. Random intercept logistic regression models where a dichotomous variable tracking whether a district split is the dependent variable. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 3: Administrative Unit Proliferation in Turkey, 1960–2018

	I	II	III	IV	V
Single-party government	2.91*** (0.33)	-0.42 (0.99)	5.28*** (0.71)		
Single-party government × Lagged (t-1) electoral volatility		0.11*** (0.03)			
Incumbent vote share (district)			0.04*** (0.01)		
Single-party government × Incumbent vote share (district)			-0.05*** (0.01)		
Coalition size				-3.49*** (0.62)	-3.42*** (0.61)
Coalition ideological connectedness				0.28*** (0.06)	0.25*** (0.09)
Coalition size × Coalition ideological connectedness					0.01 (0.01)
Lagged (t-1) electoral volatility	0.02*** (0.01)	-0.08** (0.03)	0.02** (0.01)	0.02*** (0.01)	0.02*** (0.01)
Electoral disproportionality index	0.10*** (0.02)	0.12*** (0.02)	0.15*** (0.02)	0.17*** (0.02)	0.17*** (0.02)
District margin of victory	-0.01** (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.00 (0.01)	-0.00 (0.01)
Lagged vote share of Right parties	0.02*** (0.01)	0.02*** (0.01)	0.02*** (0.01)	0.01** (0.01)	0.01** (0.01)
District split lag	-0.79** (0.38)	-0.83** (0.38)	-0.81** (0.38)	-0.78** (0.38)	-0.78** (0.38)
Share of rural population (district)	0.37 (0.48)	0.36 (0.48)	0.29 (0.48)	0.35 (0.48)	0.35 (0.48)
Ethnic majority district	-0.49** (0.25)	-0.51** (0.25)	-0.54** (0.25)	-0.55** (0.25)	-0.55** (0.25)
Ethnic party contesting in election	1.73*** (0.22)	1.84*** (0.25)	2.14*** (0.31)	2.28*** (0.29)	2.31*** (0.30)
ln(District population)	0.58*** (0.12)	0.58*** (0.12)	0.57*** (0.12)	0.58*** (0.12)	0.58*** (0.12)
Age of district	0.02*** (0.01)	0.02*** (0.01)	0.02*** (0.01)	0.02*** (0.01)	0.02*** (0.01)
Time trend	✓	✓	✓	✓	✓
Observations	10196	10196	10196	10185	10185
<i>AIC</i>	1441	1433	1429	1401	1403

Standard errors in parentheses. Random intercept logistic regression models where a dichotomous variable tracking whether a district split is the dependent variable. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

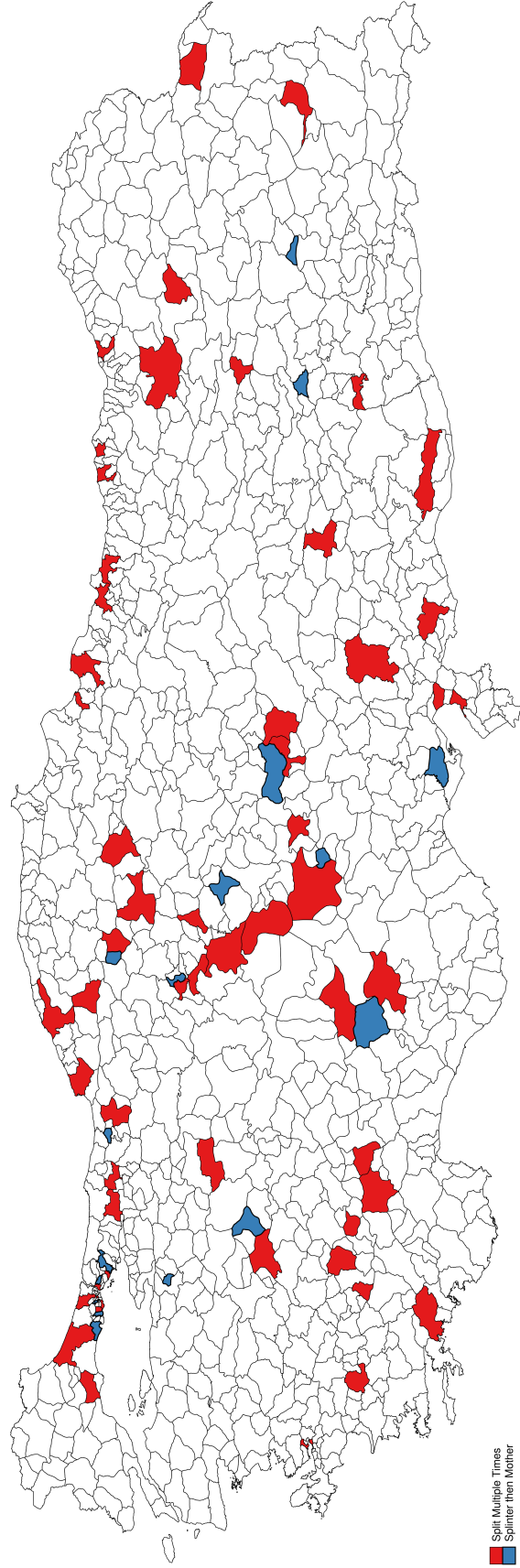


Figure 1: Subnational units impacted more than once by unit proliferation, 1960–2018

Note: The map shows the districts that were split more than once and the districts that were split after they were created.

A.4 Lag (t-2) of Electoral Volatility

In the main analysis, we use *lagged (t-1) electoral volatility* to capture the electoral uncertainty that parties take into account in their calculations at time t . However, the reader might be concerned that this time-frame is too short and that parties might have a longer view on electoral uncertainty. So, we use a further lag of volatility. Table 4 presents the estimation results from this check.

Table 4: Administrative Unit Proliferation in Turkey, 1960–2018

	II
Single-party government	5.79 ^{***} (0.78)
Lagged (t-2) electoral volatility	0.08 ^{***} (0.02)
Single-party government × Lagged (t-2) electoral volatility	-0.06 ^{***} (0.01)
Electoral disproportionality index	0.16 ^{***} (0.02)
District margin of victory	-0.02 ^{***} (0.01)
Lagged vote share of Right parties	0.02 ^{***} (0.01)
District split lag	-0.08 (0.23)
Share of rural population (district)	0.06 (0.38)
Ethnic majority district	-0.44 ^{**} (0.21)
Ethnic party contesting in election	1.62 ^{***} (0.18)
ln(District population)	0.76 ^{***} (0.09)
Age of district	0.01 ^{***} (0.00)
Time trend	✓
Observations	11103
<i>AIC</i>	2132

Standard errors in parentheses. Random intercept logistic regression models where a dichotomous variable tracking whether a district split is the dependent variable. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

A.5 Adding Further Developmental Controls

In the main analysis we use *share of rural population* as our control for development. Here we add *GDP per capita* (Aşık, Karakoç and Pamuk 2023) at the province level as another developmental control variable.

Table 5 presents the estimation results from this check.

A.6 Weighted Ideological Cohesion

One of our main interests in the paper is coalition dynamics and ideological cohesion is a key part of our argument. In the paper, we measure ideological cohesion as the absolute value of the difference between the RILE scores (Lehmann et al. 2024) of the two most extreme parties in a coalition. This calculation does not consider the relative size or strength of these parties. The reader might be concerned about the lack of this aspect from our measure. To address this, we calculate a *coalition ideological connectedness (weighted)* variable. We weight the RILE scores of the most extreme two parties in a coalition by the seat share of these parties and calculate a new ideological cohesion variable, and run the models with this variable.

Table 6 presents the estimation results from this check.

A.7 Checking for Path Dependency

In countries with an imperial past or other development trajectory where the political and economic center has held disproportionate power for a long time, the location of jurisdictions might determine a path for subsequent political and economic life (Tusalem 2020). This argument is relevant for the case of Turkey with a long imperial past and the dominance of Istanbul. To control for this factor, we include *log distance to Istanbul* to our models.

Table 7 presents the estimation results from this check.

Table 5: Administrative Unit Proliferation in Turkey, 1960–2018

	I	II	III	IV	V
Single-party government	2.78*** (0.26)	-1.32* (0.78)	4.10*** (0.53)		
Single-party government × Lagged (t-1) electoral volatility Incumbent vote share (district)		0.14*** (0.03)	0.01 (0.01)		
Single-party government × Incumbent vote share (district)			-0.03*** (0.01)		
Coalition size				-2.28*** (0.29)	-2.44*** (0.33)
Coalition ideological connectedness				0.16*** (0.03)	0.25*** (0.06)
Coalition size × Coalition ideological connectedness Lagged (t-1) electoral volatility					-0.02** (0.01)
	0.02*** (0.00)	-0.12*** (0.03)	0.01*** (0.01)	0.02*** (0.00)	0.02*** (0.01)
Electoral disproportionality index	0.09*** (0.01)	0.12*** (0.02)	0.10*** (0.02)	0.12*** (0.02)	0.12*** (0.02)
District margin of victory	-0.02*** (0.01)	-0.01** (0.01)	-0.01** (0.01)	-0.01** (0.01)	-0.01** (0.01)
Lagged vote share of Right parties	0.02*** (0.01)	0.02*** (0.01)	0.03*** (0.01)	0.02*** (0.01)	0.02*** (0.01)
District split lag	-0.12 (0.26)	-0.21 (0.25)	-0.14 (0.26)	-0.17 (0.25)	-0.21 (0.25)
Share of rural population (district)	-0.30 (0.41)	-0.30 (0.42)	-0.42 (0.42)	-0.30 (0.42)	-0.28 (0.42)
Ethnic majority district	-0.72*** (0.28)	-0.75*** (0.28)	-0.80*** (0.28)	-0.75*** (0.28)	-0.76*** (0.28)
Ethnic party contesting in election	1.31*** (0.18)	1.52*** (0.20)	1.18*** (0.22)	1.56*** (0.21)	1.52*** (0.21)
ln(District population)	0.75*** (0.10)	0.76*** (0.10)	0.74*** (0.10)	0.76*** (0.10)	0.76*** (0.10)
Age of district	0.01** (0.00)	0.01* (0.00)	0.01* (0.00)	0.01* (0.00)	0.01* (0.00)
GDP per capita (province)	-0.01** (0.00)	-0.01** (0.00)	-0.00** (0.00)	-0.01** (0.00)	-0.01** (0.00)
Time trend	✓	✓	✓	✓	✓
Observations	9238	9238	9238	9227	9227
<i>AIC</i>	1815	1790	1809	1783	1781

Standard errors in parentheses. Random intercept logistic regression models where a dichotomous variable tracking whether a district split is the dependent variable. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 6: Administrative Unit Proliferation in Turkey, 1960–2018

	IV
Coalition size	-1.54 ^{***} (0.17)
Coalition ideological connectedness (weighted)	0.12 ^{***} (0.03)
Coalition size × Coalition ideological connectedness (weighted)	0.02 [*] (0.01)
Lagged (t-1) electoral volatility	0.02 ^{***} (0.00)
Electoral disproportionality index	0.10 ^{***} (0.01)
District margin of victory	-0.01 ^{***} (0.00)
Lagged vote share of Right parties	0.02 ^{***} (0.01)
District split lag	-0.06 (0.23)
Ethnic majority district	-0.46 ^{**} (0.21)
Ethnic party contesting in election	1.41 ^{***} (0.18)
Share of rural population (district)	0.05 (0.38)
ln(District population)	0.77 ^{***} (0.09)
Age of district	0.01 ^{***} (0.00)
Time trend	✓
Observations	11092
<i>AIC</i>	2118

Standard errors in parentheses. Random intercept logistic regression models where a dichotomous variable tracking whether a district split is the dependent variable. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 7: Administrative Unit Proliferation in Turkey, 1960–2018

	I	II	III	IV	V
Single-party government	2.41 ^{***} (0.22)	-1.59 ^{**} (0.66)	3.64 ^{***} (0.47)		
Single-party government × Lagged (t-1) electoral volatility		0.14 ^{***} (0.02)			
Incumbent vote share (district)			0.01 (0.01)		
Single-party government × Incumbent vote share (district)			-0.03 ^{***} (0.01)		
Coalition size				-2.34 ^{***} (0.26)	-2.59 ^{***} (0.32)
Coalition ideological connectedness				0.17 ^{***} (0.02)	0.31 ^{***} (0.05)
Coalition size × Coalition ideological connectedness					-0.03 ^{***} (0.01)
Lagged (t-1) electoral volatility	0.02 ^{***} (0.00)	-0.11 ^{***} (0.02)	0.01 ^{***} (0.00)	0.02 ^{***} (0.00)	0.02 ^{***} (0.00)
Electoral disproportionality index	0.08 ^{***} (0.01)	0.12 ^{***} (0.02)	0.09 ^{***} (0.02)	0.14 ^{***} (0.02)	0.13 ^{***} (0.02)
District margin of victory	-0.02 ^{***} (0.00)	-0.01 ^{**} (0.00)	-0.01 ^{**} (0.01)	-0.01 ^{**} (0.00)	-0.01 [*] (0.00)
Lagged vote share of Right parties	0.03 ^{***} (0.01)	0.02 ^{***} (0.01)	0.03 ^{***} (0.01)	0.02 ^{***} (0.01)	0.02 ^{***} (0.01)
District split lag	-0.06 (0.23)	-0.17 (0.23)	-0.09 (0.23)	-0.11 (0.23)	-0.16 (0.23)
Share of rural population (district)	0.10 (0.38)	0.11 (0.38)	0.01 (0.38)	0.11 (0.38)	0.14 (0.38)
Ethnic majority district	-0.36 (0.22)	-0.40 [*] (0.22)	-0.45 ^{**} (0.23)	-0.41 [*] (0.22)	-0.43 [*] (0.22)
Ethnic party contesting in election	1.34 ^{***} (0.17)	1.55 ^{***} (0.18)	1.21 ^{***} (0.21)	1.71 ^{***} (0.20)	1.62 ^{***} (0.20)
ln(District population)	0.75 ^{***} (0.09)	0.76 ^{***} (0.09)	0.74 ^{***} (0.09)	0.76 ^{***} (0.09)	0.76 ^{***} (0.09)
Age of district	0.01 ^{***} (0.00)	0.01 ^{***} (0.00)	0.01 ^{***} (0.00)	0.01 ^{***} (0.00)	0.01 ^{***} (0.00)
ln(Distance to Istanbul)	-0.10 (0.07)	-0.10 (0.07)	-0.12 [*] (0.07)	-0.10 (0.07)	-0.10 (0.07)
Time trend	✓	✓	✓	✓	✓
Observations	11103	11103	11103	11092	11092
AIC	2142	2105	2134	2085	2077

Standard errors in parentheses. Random intercept logistic regression models where a dichotomous variable tracking whether a district split is the dependent variable. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

A.8 Controlling for System Level Changes

In the main analysis, we use a *time trend* variable to control for factors that might increase or decrease over time. There might be unobserved system level factors during certain decades, so we calculate another variable that corresponds to the decades from the 1960s to 2010s. We use this *decade* variable to control for any decade specific effect.

Table 8 presents the estimation results from this check.

A.9 Controlling for GDP Growth

Although government resource base is not limited to GDP growth, there might be concerns that the governments will only be able to undertake costly territorial reform decisions when the economy is expanding. In order to address such possible concerns and see whether the results we report can be explained away by expanding economy, we control for national GDP growth rate.

Table 9 presents the estimation results from this check.

A.10 Robust Standard Errors Clustered by Election Year

Variables like government type, coalition size, ideological connectedness, and electoral volatility vary at the national level while the dependent variable (whether a district i is split at election period t) is coded at the district level. The national level variables are common for all districts for an election period.

Our theory states that governments decide which districts to split conditional on government type and electoral incentives. Put differently, governments do not decide whether to split districts in an election period, but which types of districts to split given their government types and incentives. The other measures in the analysis vary across districts. So, based on our theory, government type determines the opportunity structure and district characteristics define the ultimate choice.

Table 8: Administrative Unit Proliferation in Turkey, 1960–2018

	I	II	III	IV	V
Single-party government	2.35*** (0.22)	-2.29*** (0.67)	3.74*** (0.47)		
Single-party government × Lagged (t-1) electoral volatility Incumbent vote share (district)		0.16*** (0.02)	0.01 (0.01)		
Single-party government × Incumbent vote share (district)			-0.04*** (0.01)		
Coalition size				-2.31*** (0.26)	-2.60*** (0.31)
Coalition ideological connectedness				0.17*** (0.02)	0.33*** (0.05)
Coalition size × Coalition ideological connectedness Lagged (t-1) electoral volatility					-0.03*** (0.01)
	0.03*** (0.00)	-0.13*** (0.02)	0.02*** (0.00)	0.03*** (0.00)	0.03*** (0.00)
Electoral disproportionality index	0.08*** (0.01)	0.12*** (0.02)	0.10*** (0.02)	0.14*** (0.02)	0.14*** (0.02)
District margin of victory	-0.02*** (0.00)	-0.01*** (0.00)	-0.01*** (0.01)	-0.01*** (0.00)	-0.01*** (0.00)
Lagged vote share of Right parties	0.02*** (0.01)	0.02*** (0.01)	0.03*** (0.01)	0.02*** (0.01)	0.02*** (0.01)
District split lag	0.06 (0.23)	-0.09 (0.23)	0.02 (0.23)	0.02 (0.23)	-0.05 (0.23)
Share of rural population (district)	0.36 (0.37)	0.32 (0.37)	0.24 (0.37)	0.41 (0.37)	0.42 (0.38)
Ethnic majority district	-0.42* (0.21)	-0.47** (0.21)	-0.53** (0.22)	-0.47** (0.21)	-0.48** (0.21)
Ethnic party contesting in election	1.34*** (0.17)	1.59*** (0.19)	1.17*** (0.21)	1.68*** (0.20)	1.62*** (0.20)
ln(District population)	0.79*** (0.09)	0.80*** (0.09)	0.79*** (0.09)	0.81*** (0.09)	0.81*** (0.09)
Age of district	0.01** (0.00)	0.01** (0.00)	0.01* (0.00)	0.01* (0.00)	0.01* (0.00)
Decade	✓	✓	✓	✓	✓
Observations	11103	11103	11103	11092	11092
AIC	2174	2129	2162	2118	2105

Standard errors in parentheses. Random intercept logistic regression models where a dichotomous variable tracking whether a district split is the dependent variable. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 9: Administrative Unit Proliferation in Turkey, 1960–2018

	I	II	III	IV	V
Single-party government	2.87*** (0.26)	-1.83*** (0.71)	4.62*** (0.54)		
Single-party government × Lagged (t-1) electoral volatility Incumbent vote share (district)		0.17*** (0.03)	0.02*** (0.01)		
Single-party government × Incumbent vote share (district)			-0.04*** (0.01)		
Coalition size				-3.30*** (0.31)	-3.44*** (0.34)
Coalition ideological connectedness				0.25*** (0.03)	0.39*** (0.05)
Coalition size × Coalition ideological connectedness Lagged (t-1) electoral volatility					-0.03*** (0.01)
	0.01** (0.01)	-0.16*** (0.03)	0.00 (0.01)	-0.00 (0.01)	0.00 (0.01)
Electoral disproportionality index	0.09*** (0.01)	0.15*** (0.02)	0.12*** (0.02)	0.19*** (0.02)	0.19*** (0.02)
District margin of victory	-0.02*** (0.00)	-0.01** (0.00)	-0.01** (0.01)	-0.01* (0.00)	-0.01 (0.00)
Lagged vote share of Right parties	0.02*** (0.01)	0.02*** (0.01)	0.03*** (0.01)	0.02*** (0.01)	0.01** (0.01)
District split lag	-0.09 (0.24)	-0.20 (0.23)	-0.12 (0.24)	-0.16 (0.23)	-0.22 (0.23)
Share of rural population (district)	0.06 (0.38)	0.07 (0.38)	-0.02 (0.38)	0.12 (0.38)	0.15 (0.38)
Ethnic majority district	-0.46** (0.21)	-0.52** (0.22)	-0.54** (0.22)	-0.54** (0.22)	-0.55** (0.22)
Ethnic party contesting in election	0.28 (0.23)	0.43* (0.23)	0.30 (0.24)	0.30 (0.23)	0.14 (0.24)
ln(District population)	0.78*** (0.09)	0.79*** (0.09)	0.78*** (0.09)	0.81*** (0.09)	0.82*** (0.09)
Age of district	0.01*** (0.00)	0.01** (0.00)	0.01** (0.00)	0.01** (0.00)	0.01** (0.00)
Average GDP growth	-0.38*** (0.07)	-0.47*** (0.07)	-0.43*** (0.07)	-0.66*** (0.08)	-0.65*** (0.08)
Time trend	✓	✓	✓	✓	✓
Observations	11103	11103	11103	11092	11092
AIC	2116	2069	2104	2022	2013

Standard errors in parentheses. Random intercept logistic regression models where a dichotomous variable tracking whether a district split is the dependent variable. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

However, government type does not vary within election years, meaning there will likely be autocorrelation in the data. Stated differently, in our panel of districts, we will have country-level factors that will affect districts in a given election period. Our estimation method does not allow us to cluster by election year to take into account this factor. Therefore, we use mixed effects logistics regression and cluster robust standard errors by election year. Our results do not change, and this illustrates that district is the strategic unit when the national level variables are constant within election period.

Table 10 presents the estimation results from this check.

Appendix B Descriptive Statistics

Table 11 lists all variables used in the analysis, descriptive statistics and coding information.

Table 11: Descriptive Statistics

Variables	Coding
<i>Single-party</i> : $\mu=.619$, $\sigma=.485$, range=0-1, $N=12,246$	Dummy variable for government type at the time of election. Single-government is coded 1.
<i>Coalition</i> : $\mu=.38$, $\sigma=.485$, range=0-1, $N=12,246$	Dummy variable for government type at the time of election. Coalition government is coded 1.
<i>Electoral Volatility</i> : $\mu=31.83$, $\sigma=18.59$, range=9.85-64.15, $N=12,883$	The classical Pedersen index for electoral volatility. The sum of the absolute values of differences in the vote shares of parties (total net change) from one election to the next ranges between 0 and 200. It is then divided by 2 to get a volatility score that ranges from 0 to 100. Lagged(t-1) value is used in the models, and lagged(t-2) value is used in robustness checks.
<i>Incumbent vote share</i> : $\mu=43.81$, $\sigma=26.19$, range=0-100, $N=12,883$	Incumbent vote share at the district level (before an election).

(Continued)

Table II – (Continued)

Variables	Coding
<i>Coalition size:</i> $\mu=1.161$, $\sigma=1.68$, range=0–5, $N=12,883$	Coalition size is measured as the number of parties in a coalition. It is coded as zero for single-party governments which facilitates the interactions in the main analysis. For instance, in the model where we use a multiplicative interaction term to test our expectation about coalition size and ideological connectedness, we simply include an interaction term of coalition size x coalition ideological connectedness which functions as a three-way interaction thanks to this coding choice.
<i>Coalition ideological connectedness:</i> $\mu=10.17$, $\sigma=10.17$, range=0–56.603, $N=12,230$	To measure ideological cohesion in a coalition, we calculated the absolute value of the difference between the RILE scores (Lehmann et al. 2024) of the two most extreme parties in coalitions. It is coded as zero for single-party governments which facilitates the interactions and hypothesis testing in the main analysis. For instance, in the model where we are testing the hypothesis about coalition ideological connectedness and district splits, we do not need to use a multiplicative interaction as the observations for single-party governments are be taken out of the final estimation.
<i>Coalition ideological connectedness (weighted):</i> $\mu=4.34$, $\sigma=7.92$, range=0–24.35, $N=12,230$	The balance of power between the two most extreme parties can potentially distort the calculation of ideological cohesion measure. As an additional measure, we used the seat share of the parties in the coalition and calculated a weighted connectedness measure by using the seat share as the weight. The RILE scores (Lehmann et al. 2024) are weighted by the seat share of the two most extreme partners of a coalition and a new score is obtained for ideological cohesion.
<i>Electoral disproportionality:</i> $\mu=9.555$, $\sigma=6.398$, range=1.99–27.06, $N=12,833$	The classical Gallagher index. It shows the discrepancy between the vote share and seat share for the parties.
<i>District margin of victory:</i> $\mu=22.148$, $\sigma=18.188$, range=0–96.4, $N=12,883$	This is a measure for district competitiveness. We consider all parties in the calculation of this measure regardless of whether they have parliamentary representation or whether they are one of the two biggest parties in a particular election. The measure is the difference between the vote shares of the two leading parties at the district level.

(Continued)

Table II – (Continued)

Variables	Coding
<i>Lagged (t-1) vote share of Right parties:</i> $\mu=11.912$, $\sigma=17.41$, range=1.7–98.8, $N=11,912$	It is calculated as the sum of the vote shares of <i>all</i> Right parties. It is used as a control for the partisan leaning of a district.
<i>District split:</i> $\mu=.026$, $\sigma=.161$, range=0–1, $N=12,883$	The dependent variable is a dummy variable for district split. It is coded 1 for district splits.
<i>District split lag:</i> $\mu=.026$, $\sigma=.161$, range=0–1, $N=12,883$	Recent territorial reform decisions might affect developments in their immediate aftermath (next election). In order to control for such effects on district split decisions, we calculate a dummy variable that is coded 1 when a district is split in the preceding election cycle.
<i>Age of district:</i> $\mu=49.23$, $\sigma=27$, range=0–95, $N=12,883$	The age of district at election time. For the districts that were formed before the foundation of the Republic in 1923, beginning point for calculation is 1923.
<i>Ethnic majority district:</i> $\mu=.121$, $\sigma=.326$, range=0–1, $N=12,883$	Dummy variable that is coded 1 for districts where there is an ethnic majority (Tezcur 2016).
<i>Ethnic party contesting:</i> $\mu=.508$, $\sigma=.499$, range=0–1, $N=4,735$	Dummy variable that is coded 1 for elections where there is an ethnic party contesting.
<i>Share of rural population:</i> $\mu=.588$, $\sigma=.229$, range=.0005–.968, $N=12,658$	Starting with the administrative reforms of 2012, rural vote share is no longer recorded for provinces where a metropolitan municipality is established. For these provinces, the rural population was added to urban population as the single category. Instead of treating the rural population as missing for the affected provinces, we followed earlier practice (Yildirim 2024) and used the rural share of population in 2011 for the districts for which this data is not available post-2012.
<i>ln(District population):</i> $\mu=10.521$, $\sigma=1.089$, range=7.321–14.099, $N=12,872$	The log of district population is used in the analyses.
<i>Time trend:</i> $\mu=9.286$, $\sigma=4.52$, range=1–16, $N=12,883$	The time trend variable starts with 1 for the first election in the dataset (1961) and ends at 16 for the last election in the dataset (2018).
<i>GDP per capita:</i> $\mu=86.951$, $\sigma=36.972$, range=16.9–257.3, $N=10,756$	These estimates are at the province level and are provided for 58 provinces. Country average is set to 100 to allow comparison among provinces (Aşık, Karakoç and Pamuk 2023).

(Continued)

Table II – (Continued)

Variables	Coding
<i>GDP growth rate</i> : $\mu=4.641$, $\sigma=1.735$ range=1.156–7.4, $N=12,883$	The annual GDP growth rate data come from OECD. The indicator denotes the percentage change over each previous year in United States dollars (base year 2015). We averaged GDP growth rate based on election periods to have one value per election cycle.
<i>ln(Distance to Istanbul)</i> : $\mu=6.411$, $\sigma=.924$, range=0–7.534, $N=12,883$	Natural logarithm of the distance of the district to Istanbul.
<i>Decade</i> : $\mu=4.003$, $\sigma=1.778$, range=1–6, $N=12,883$	A continuous variable that starts with 1 for the 1960s and ends with 6 for the 2010s. It is meant to capture system level changes specific to a decade.

Sources: TUIK (Statistical Institute), Supreme Election Council, Official Gazette, OECD.

Table 10: Subnational Unit Proliferation in Turkey, 1960–2018

	I	II	III	IV	V
Single-party government	2.27** (1.02)	-3.36 (2.13)	4.29** (2.16)		
Single-party government × Lagged (t-1) electoral volatility Incumbent vote share (district)		0.20** (0.10)	0.02 (0.03)		
Single-party government × Incumbent vote share (district)			-0.05* (0.03)		
Coalition size				-2.51*** (0.88)	-2.81*** (0.76)
Coalition ideological connectedness				0.20** (0.08)	0.38*** (0.12)
Coalition size × Coalition ideological connectedness Lagged (t-1) electoral volatility	0.03* (0.02)	-0.16 (0.10)	0.02 (0.02)	0.03* (0.02)	-0.04* (0.02)
Electoral disproportionality index	0.09* (0.05)	0.15* (0.08)	0.11 (0.08)	0.16** (0.08)	0.17** (0.08)
District margin of victory	-0.03** (0.01)	-0.02** (0.01)	-0.01* (0.01)	-0.02* (0.01)	-0.01** (0.01)
Lagged vote share of Right parties	0.02*** (0.01)	0.02*** (0.01)	0.03*** (0.01)	0.02*** (0.01)	0.01*** (0.01)
District split lag	0.23 (0.22)	-0.00 (0.30)	0.14 (0.18)	0.13 (0.21)	0.03 (0.30)
Share of rural population (district)	1.12 (0.93)	0.77 (0.90)	0.74 (0.88)	0.83 (0.85)	0.79 (0.89)
Ethnic majority district	-0.37** (0.16)	-0.44*** (0.14)	-0.49*** (0.15)	-0.45*** (0.13)	-0.46*** (0.13)
Ethnic party contesting in election	0.95 (0.64)	1.46 (0.95)	0.95 (0.90)	1.55 (0.97)	1.54 (1.02)
ln(District population)	0.88*** (0.29)	0.85*** (0.31)	0.85*** (0.31)	0.85*** (0.31)	0.86*** (0.31)
Age of district	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)
Observations	1103	1103	1103	11092	11092
<i>AIC</i>	2203	2140	2177	2128	2112

Robust standard errors clustered by election year in parentheses. Mixed effects logistic regression models where a dichotomous variable tracking whether a district split is the dependent variable. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Appendix C Bibliography

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